

## State of Nevada

# Division of Environmental Protection Bureau of Corrective Actions



## **Titanium Metals Corporation**



Titanium Metals Corporation (TIMET) is one of the world's largest producers of high quality titanium products for aerospace, industrial and consumer applications. Corporate activities span every phase of titanium manufacture and sales, from converting rutile ore into titanium sponge, to producing ingot and slab and mill products. TIMET is head-quartered in Denver, Colorado and has research, manufac-

turing, and distribution facilities worldwide.

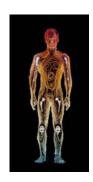


TIMET's Henderson, Nevada facility is located in the Black Mountain Industrial Complex (BMI) and began operations in 1950. It has a workforce of over 450 local workers, making it one of the largest industrial facilities in the state.



### Titanium Production

TIMET is a recognized leader in titanium quality and technology producing 8,600 metric tons of titanium sponge per year, and plans to expand the sponge facility are projected to increase production in 2007. Titanium's unique combination of strength, weight, and corrosion resistance makes it ideal for critical applications. The aerospace industry depends heavily upon titanium as titanium has nearly half the weight of steel and is used for engines, airframes, and landing gear. Titanium is also specified in hundreds of applications such as high-tech architectural material, deepsea drilling operations, power generation, chemical processing, pollution control, sporting goods, medical instruments, and medical implants.



## **Environmental Conservation and Restoration**



#### **Project Timeline**

#### 1983

Initial Groundwater Well Installation

#### 1989

**EPA Screening** 

#### 1991

Environmental Impact Study

#### 1993

Environmental Conditions Assessment

#### 1997

Site Investigation

#### 1999

Additional Site Investigation and Interim Remedial Actions

#### 2003

Project planning and scoping in accordance with current EPA guidance

#### 2004

Preliminary Conceptual Site Model for Accelerated Work

Interim Removal Actions for Francy's Mountain and solids ponds

#### 2005

Water Conservation Facility is Active

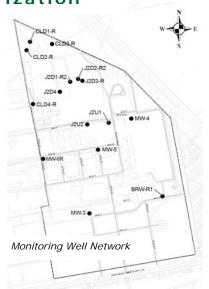
Hydrogeologic Characterization of the Plant Site

Transfer of the Pabco Ponds to BRC TIMET continually strives to improve its environmental performance. The Henderson facility has made significant changes to its operations, including:

- Installation of a \$50 million magnesium recovery plant which dramatically reduced air emissions
- Installation of a \$100 million vacuum distillation process for production of titanium sponge, which substantially reduced air emissions and wastewater generation
- Discontinuation of 31 evaporation ponds that were used to manage spent process fluids and solids.
- Beginning in 2005, the removal of approximately 20 tons of solids historically stored on-site as part of the potential source control program.

## **Groundwater Characterization**

Quarterly groundwater monitoring is conducted on at least 15 wells located at the Plant Site for on-going data analysis. Groundwater collected at these select locations is regularly tested for anions (salt components comprising total dissolved solids), metals, volatile organic compounds, and radionuclides.



#### Water Conservation

In 2005, the TIMET Henderson plant commissioned its on-site Water Conservation Facility. This facility incorporates state-of-the-art neutralization, clarification, and filtration equipment with an industrial reverse osmosis system to benefit our water-limited community by returning clean water to our public water system. This new process minimizes the



need for evaporation ponds, and allows for environmental remediation of the Pabco pond site east of Boulder highway.

## TITANIUM METALS CORPORATION

## Hydrogeologic Investigation

Groundwater monitoring results indicate some impact to groundwater at the north end of the Plant Site. Data gaps identified through the interpretation of previous groundwater quality data are now the focus of additional characterization work, including the execution of the Sampling and Analysis Plan for further Hydrogeologic Characterization of the Plant Site. Concurrent with this effort is the projection

and understanding of possible exposure pathways, the development of site-specific, risk-based action levels, and the identification of applicable remedial alternatives. A list of site related chemicals associated with both the TIMET operation and the overall BMI project has been developed and is used to guide current and future groundwater monitoring activities.



#### **FUTURE ACTIVITIES**

- Fill Data Gaps
- Hydrogeologic Characterization
- Quarterly Monitoring
- Establish Site-Specific Risk- Based Action Levels
- Develop a Final Corrective Action Plan



NDEP oversees all aspects of the environmental work at the facility. Additional information can be obtained from Brian Rakvica (702-486-2870 ext. 247) at the State. The company welcomes community input in this project and recognizes the need to respond to community concerns. Previous reports related to the environmental work at the facility can be found at the City of Henderson Public Library. If you have any questions, please feel free to contact Craig Wilkinson, Manager Health, Environment, Safety 702-566-4453.